

ABSTRACT

THESIS: Cognitive Flexibility, Interhemispheric Transfer, and QEEG in Concussed Female Athletes

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DATE: July 2013

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Sports-related concussions are known to cause neurocognitive and neurological deficits, and recent research suggests these problems may be much longer lasting than previously anticipated. This study seeks to identify potential lasting effects of sports-related concussion in female athletes who sustained sports-related concussions at least six months prior to participating. Cognitive flexibility, interhemispheric transfer time, and four EEG frequencies were used as predictor variables in a discriminant function analysis. Although results were not significant, the predictor variables correctly classified a sizable proportion of cases. Results of follow-up testing suggest that female athletes display decreases in theta power after the initial recovery period of a concussion which may relate to memory deficits observed later in life in athletes who have sustained sports-related concussions. Future research in this area with greater statistical power may expand current knowledge regarding other potential lasting effects of concussion in female athletes.

